

South Carolina Phytoplankton Monitoring Network

Frequently Asked Questions (FAQ)



Q. What happens when I volunteer with SCPMN?

A. Volunteer groups will be given an instructional training course by one or more staff members, depending on class size and availability. The staff member(s) will give a presentation that discusses the program, introduces phytoplankton, and discusses their ecological importance. Groups will be given copies of a Phytoplankton Identification Key using pictures from Identifying Marine Phytoplankton edited by Carmelo R. Tomas. Students will then watch an identification video that will aid them in understanding which phytoplankton are common to South Carolina waters. Finally, students will look at a plankton sample to develop identification skills. This last step may be scheduled for a second visit, depending on class length.



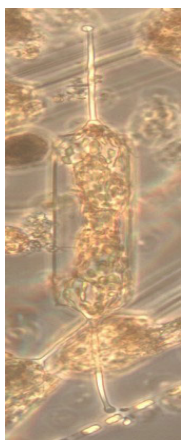
Q. How much time is required to become an active SCPMN volunteer?

A. Initial training takes the most time and varies from one group to the next. Once training is complete each sample will take approximately 5-10 minutes to collect and a half hour to an hour to identify. As you get more comfortable with identification, the time will decrease. The overall time will depend on your proximity to your sampling site, number of sites you choose, and the level of your identification skills.



Q. Once we have completed the training session(s) are we left on our own?

A. No, you are never left on your own. You will begin making weekly plankton tows and identify the samples on your own after your initial training(s). We are here to aid you in any way possible and answer any further questions.



Q. Teachers: Do you want to be involved, but you are unsure how to get your class started?

A. Try this project outside of school with a biology club or some group of interested students that can meet once a week to sample and identify what they have collected. You could also try dividing your class into groups and give each group a sampling site. You can choose a team leader for each group to take the sample every week and then that team will identify the sample from that site. Keep students assigned to the same groups and sites so they can better monitor what changes have occurred over time.



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Q. Teachers: Do I have to bring my students to the sampling site?

A. If you have field trip time available, some teachers have found it helpful to bring their class to the sampling site at least once to experience the plankton tow. However, we realize this is not always possible. Some teachers assign individual students to collect the sample. Other teachers collect samples outside of work and bring the sample in themselves for their students to identify in class.

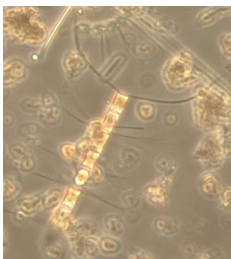
Q. How do I take a phytoplankton sample?



A. Groups will use a plankton net with a 3 point bridle, 20 micron mesh size with a 40 cm length and 15 cm ring diameter. Most groups will be sampling off of a floating dock or edge of a pond, so they will be dipping their nets into the water (horizontal plankton tow) instead of performing an actual tow behind a boat.

Q. How often will I have to sample and report my results?

A. We ask our volunteers to make a weekly or biweekly commitment. Consistent sampling is the key to strengthening our knowledge of South Carolina's phytoplankton community.



Q. Where do I collect my sample(s)?

A. You have the ability to choose your own sampling site. The only criteria are that no other SCPMN volunteers are sampling at or near your site and that the salinity at your site is over 15 ppt. The salinity of your potential site can be tested with a refractometer. Please feel free to contact SCPMN staff if you are unsure about salinity or sampling locations. Ultimately your site should be convenient for you or someone else on your sampling team to reach every week.



Q. How can I preserve my samples for future use?

A. The recipe for Lugol's solution, a preservative agent, can be found under the volunteers section of our homepage.



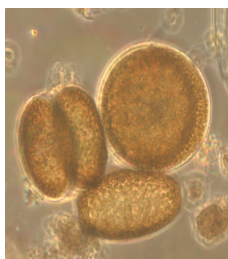
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Q. How long after I take a sample can I wait to identify it?

A. It is best to look at your sample the same day it is collected. However, samples will last approximately 3 days. After the third day you will still be able to see phytoplankton but movement, a distinguished characteristic, will have stopped. To keep your samples healthy as long as possible they should be kept at **room temperature** with the lid placed loosely on top. Do not twist the lid into place. By placing the lid loosely on top you are allowing oxygen to enter into the bottle.

Q. How many sampling sites can I monitor?



A. You can monitor as many sampling sites as your group would like. However, we recommend that beginners take on no more than two sampling sites to start. As you become more comfortable with phytoplankton identification, you are welcome to select additional sites.

Q. Do I have to count each individual phytoplankton?

A. No, groups will be trained to estimate the approximate abundance of each species using an abundance ratio chart. If levels of any species become so great that you report a bloom, we will send a scientist to collect a sample. A cell count will be conducted at the NOAA laboratory.

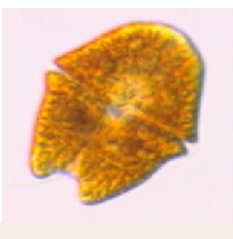


Q. What equipment will I need to complete my volunteer responsibilities?

A. There are several pieces of equipment you will need for this project. The South Carolina Phytoplankton Monitoring Network will provide a training manual, identification keys, refractometer, plankton net, sample bottles, and data sheets. Other learning materials and activities will also be provided as requested. Microscopes, slides & cover slips, and pipettes will need to be provided by you.

Q. How do I take care of my equipment?

A. Your equipment should be **cleaned with freshwater after every use**. The refractometer faceplate (where you place your sample) should be washed with freshwater and dried with a soft towel prior to being replaced in its case. Your plankton net should be rinsed inside and out with freshwater and hung up to dry. This ensures that no sediment or salt crystals will buildup and block the tiny holes in the mesh. Finally, after looking at your samples you can either preserve them for future use or rinse them with freshwater to prevent contamination between samples. (PLEASE READ: How can I preserve my samples for future use?) Remember that your equipment is your responsibility and will **not** be replaced if it is lost or ruined due to neglect.





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Q. What do I do if my equipment breaks?

A. We understand that some normal wear on the equipment may cause small tears in your net or a metal clasp on the bridle of the net to come loose. If you have any problems with your equipment, please call us immediately so that we can fix or replace your equipment. However, remember that your equipment is your responsibility and will not be replaced if it is lost or ruined due to neglect. (PLEASE READ: “How do I take care of my equipment?”)

Q. Can I use my equipment at other sites?

A. If your group is interested in looking at other sites, for example you are on vacation or a field trip, we encourage you to use your equipment to explore the various conditions that exist in the marine environment. However, remember that your equipment is your responsibility and will not be replaced if it is lost or ruined due to neglect. It is not necessary to record observations on a data sheet for NOAA unless a bloom is observed.

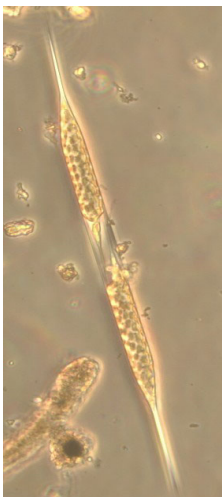


Q. Teachers: Can I meet South Carolina Science Curriculum standards by participating in this program?

A. Yes, we can help you meet curriculum requirements in the areas of technology, sampling techniques, cell structure, food web, and human health. Please visit the SC Curriculum Requirements section on our homepage.

Q. How can I submit my results to SCPMN?

A. Your data sheet can be mailed, faxed, or emailed in an excel attachment weekly or biweekly. We will provide you with the correct forms.



Q. What are the benefits of becoming a SCPMN volunteer?

A. SCPMN volunteer groups are an asset to their community through the knowledge that they have gained and will hopefully share. Volunteers become the primary investigators for the waters and public health in their community. The program also works well as a community group initiative or can be incorporated into the classroom using SC Science Curriculum Standards. Benefits include the scientific sampling equipment given to participants to fulfill volunteer responsibilities. In addition to educational and community awareness benefits, volunteers are involved with research and have opportunities to tour NOAA research vessels.



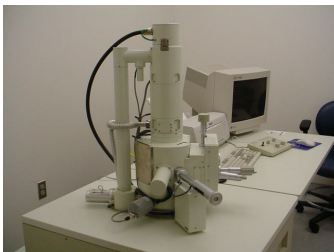
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Q. What happens with my data once it is submitted?

A. Once your data sheet reaches us, we enter the data into an Access database. This database stores all of your abundance ratios for each species as well as other pertinent data about your site such as salinity, temperature, site location, time, and date of collection. This data can be download from our website on a site to site basis in Microsoft Excel spreadsheets format.

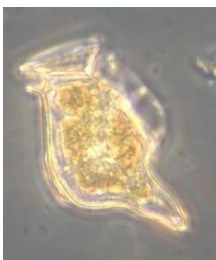
This data is also entered into a Geographic Information System (GIS) database that allows us to visually interpret your data and answer specific questions about any given parameter. It is important to provide SCPMN staff with the latitude and longitude of your site, so that your data can be entered into the GIS database. If you can not obtain these coordinates please let a SCPMN staff member know and we will gladly come out to collect it. Images from the GIS database can be seen on our web site. These images will be changed and updated every month as new data is submitted and processed.



In October of 2002, SCPMN staff presented two posters at the Xth International Harmful Algal Bloom Conference in St. Petersburg, Florida. Because SCPMN's primary investigators are made up of the community at large, SCPMN was recognized for our numerous data sites and expanded coverage area. By the end of the conference several other states and countries had expressed interest in developing a monitoring program based on SCPMN.

Q. How do I get the most out of volunteering for SCPMN?

A. Suggestion: A great initial step is to get on a consistent sampling schedule. Perhaps have the same student, team leader, or teacher/project leader get the sample from the same, sampling location every week. Then pick the same weekly time to identify your samples. This will help you maintain a more consistent schedule for monitoring your sampling site and reporting consistent data.



If we have not addressed your specific question(s) please feel free to visit our web site or contact us personally. We look forward to working with you!

Thank You, SCPMN Staff

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